

4.2.5.1 Land Resources

No Action Alternative

Under this alternative, nonsurplus HEU would continue to be stored in stabilized form in accordance with the *Environmental Assessment for the Proposed Interim Storage of Enriched Uranium Above the Maximum Historical Storage Level at the Y-12 Plant, Oak Ridge, Tennessee*, at the current Y-12 Plant interim storage location. The ongoing (no new action) activities conform with present and future land-use plans, policies, and controls. Therefore, no direct or indirect effects to land resources would be anticipated beyond the effects of existing and future activities that are independent of the Proposed Action.

Upgrade Alternative

Preferred Alternative: Modify Existing Y-12 Plant for Continued Highly Enriched Uranium Storage

The ORR nonsurplus HEU inventory requiring storage until final disposition would be stored at Y-12 in existing modified facilities; no new facilities would be built. Therefore, there would be no land disturbance or additional land area required. The majority of this HEU would be housed in facilities currently utilized for HEU storage. The remaining HEU would be stored in facilities that are currently being converted into storage areas. Five existing Y-12 plant facilities would be used for the long-term HEU storage mission.

Land Use. Upgrading the existing HEU storage facility would not change land use. The upgrade would conform with the current *Oak Ridge Reservation Site Development and Facilities Utilization Plan*, which notes that Y-12 is the national storage repository for HEU (OR DOE 1989a:3-5). [Text deleted.] As discussed in Section 4.2.5.8, no in-migration of construction or operation workers is anticipated. Therefore, no indirect effects to offsite land use would occur.

No prime farmlands exist onsite. The upgrade would not be in conflict with city of Oak Ridge land-use plans, policies, and controls since the current *Oak Ridge Area Land Use Plan* designates the potential site for industrial use. Offsite land use would not be affected.

Visual Resources. Because this alternative proposes to modify existing facilities, potential impacts to visual resources would not be caused by the upgrade. The current VRM Class 5 designation of Y-12 would remain.

Collocation Alternative

Construct New Plutonium Storage Facility; Maintain Existing Highly Enriched Uranium Storage Facilities at Y-12 Plant

This option assumes the use of existing storage, No Action for HEU (continued storage of ORR nonsurplus HEU material at Y-12 until final disposition), and construction of a new Pu storage facility east of K-25 and west of ORNL near the intersection of Route 95 and Bear Creek Road, to accommodate all Pu within the scope of this PEIS. Although No Action for HEU would not disturb land or require additional land area, construction of the new consolidated Pu facility would disturb 58.5 ha (144 acres) of land area during construction of which 56 ha (138 acres) of land area would be used during operations. The facility would be sited in a buffer zone less than 1.6 km (1 mi) from the site boundary.

Land Use. Construction and operation of the consolidated Pu storage facility would change the existing forested/undeveloped land use of the potential facility site located near the intersection of Route 95 and Bear Creek Road. A portion of the consolidated proposed facility location is situated in the NERP. The future land-use plan of the current *Oak Ridge Reservation Site Development and Facilities Utilization Plan* designates a portion of the potential site as a Waste Management Area (OR DOE 1991f:5-3). Therefore, potential direct land-use impacts could occur for the Pu consolidation facilities. No direct effects to land use or visual resources are anticipated with No Action for HEU. As discussed in Section 4.2.5.8, expected vacancies and historic housing construction rates indicate that there would be sufficient housing available to accommodate in-migrant construction and operational workers and their families. Therefore, no indirect impacts to offsite land use would occur.

The option would affect the use of the NERP, but other ORR land uses would not be affected. No prime farmlands exist onsite. The option would not be in conflict with the city of Oak Ridge land-use plans, policies, and controls since the current *Oak Ridge Area Land Use Plan* designates the potential site for Industrial and/or Public land use depending on the exact location chosen.

Visual Resources. [Text deleted.] Construction and operation of the consolidation facility would change the current VRM Class 4 designation of the Bear Creek Road/Route 95 site to Class 5, which would cause potential visual impacts to Bear Creek Road and Route 95, public roadways with high sensitivity levels. Construction and operation activities and facility development on the environmentally sensitive (wooded and steep slopes) site would be highly visible from these roadways and would alter the existing landscape character.

Construct New Plutonium Storage Facility and Modify Existing Highly Enriched Uranium Storage Facilities at Y-12 Plant

This option includes the construction of a new Pu storage facility at ORR east of K-25 and west of ORNL near the intersection of Route 95 and Bear Creek Road and modification of the existing HEU storage facility at Y-12. The option would disturb 58.5 ha (144 acres) of land area during construction of which 56 ha (138 acres) would be used during operations. The facility would be sited in a buffer zone less than 1.6 km (1 mi) from the site boundary.

Land Use. Land-use effects at the Bear Creek Road/Route 95 site would be similar to the Collocation Alternative new Pu storage facility. Upgrading the existing HEU storage facilities at Y-12 would not change land use; the upgrade would conform with the current *Oak Ridge Reservation Site Development and Facilities Utilization Plan* (OR DOE 1989a:3-5). As discussed in Section 4.2.5.8, expected vacancies and historic construction rates indicate that there would be sufficient housing available to accommodate in-migrant construction and operational workers and their families. Therefore, no indirect effects to offsite land use would occur as a result of the option.

Impacts to other ORR land uses, special status lands, and potential conflicts with the city of Oak Ridge land-use plans, policies, and controls would be similar to the Collocation Alternative new Pu storage facility.

Visual Resources. Visual resources effects at the Bear Creek Road/Route 95 site would be similar to the Collocation Alternative new Pu storage facility. However, the magnitude and extent of potential visual effects could be greater due to the larger area of land disturbed. Potential effects of the Y-12 upgrade on the sensitive viewpoints and special status lands would not occur; the existing VRM Class 5 designation of the Y-12 Plant would remain.

Construct New Plutonium and Highly Enriched Uranium Storage Facilities

Under this option, all HEU within the scope of this PEIS would be stored at a primary new storage plant, collocated with the Pu storage plant at ORR on undisturbed land east of K-25 and west of ORNL near the

intersection of Route 95 and Bear Creek Road. Pu and HEU storage in existing DOE storage facilities would be phased out. The collocated storage plant would require a total of 23 buildings, the majority of which would be one level. No structure would exceed three levels. Land disturbance would be 89.5 ha (221 acres) during construction of which 87 ha (215 acres) would be used during operation. A buffer zone less than 1.6 km (1 mi) would be provided between facilities and the ORR site boundary. Although more land area would be disturbed, impacts to land resources would be similar to the Collocation Alternative new Pu storage facility.

Subalternative Not Including Strategic Reserve and Weapons Research and Development Materials

Under this subalternative, land effects during construction and operation would be almost the same in extent and magnitude to the No Action Alternative, Upgrade Alternative, and Collocation Alternative because the facility would be almost the same. However, because the smaller quantity of material would require smaller facilities, it is likely that less land area would be disturbed during construction and used during operations. [Text deleted.]

Phaseout

Phaseout of the current HEU storage mission would not require additional land area or new construction. ORR nonsurplus HEU material would be moved out of Y-12 to the collocation site. Potential impacts to visual resources could occur if facilities are not maintained.

[Text deleted.]